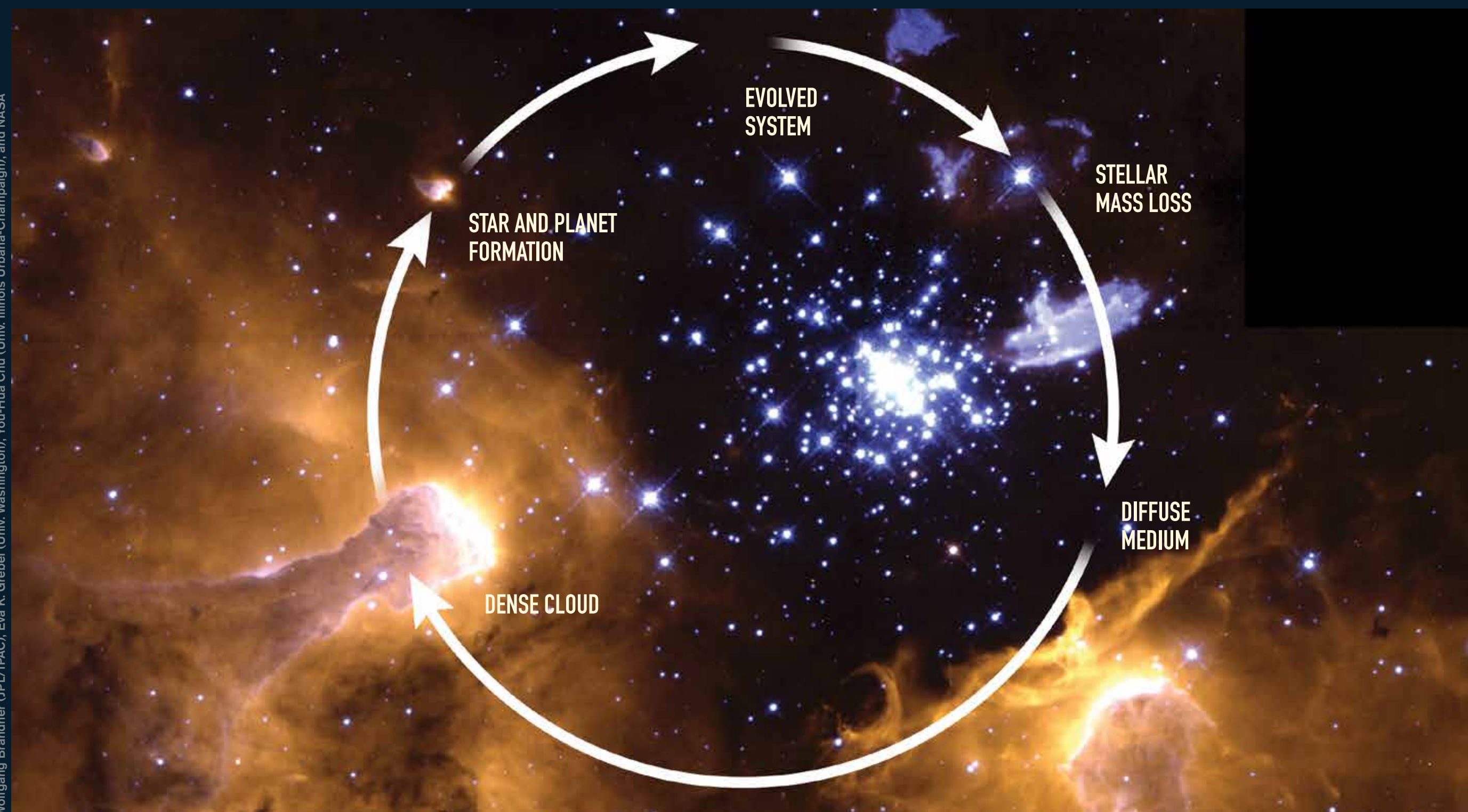


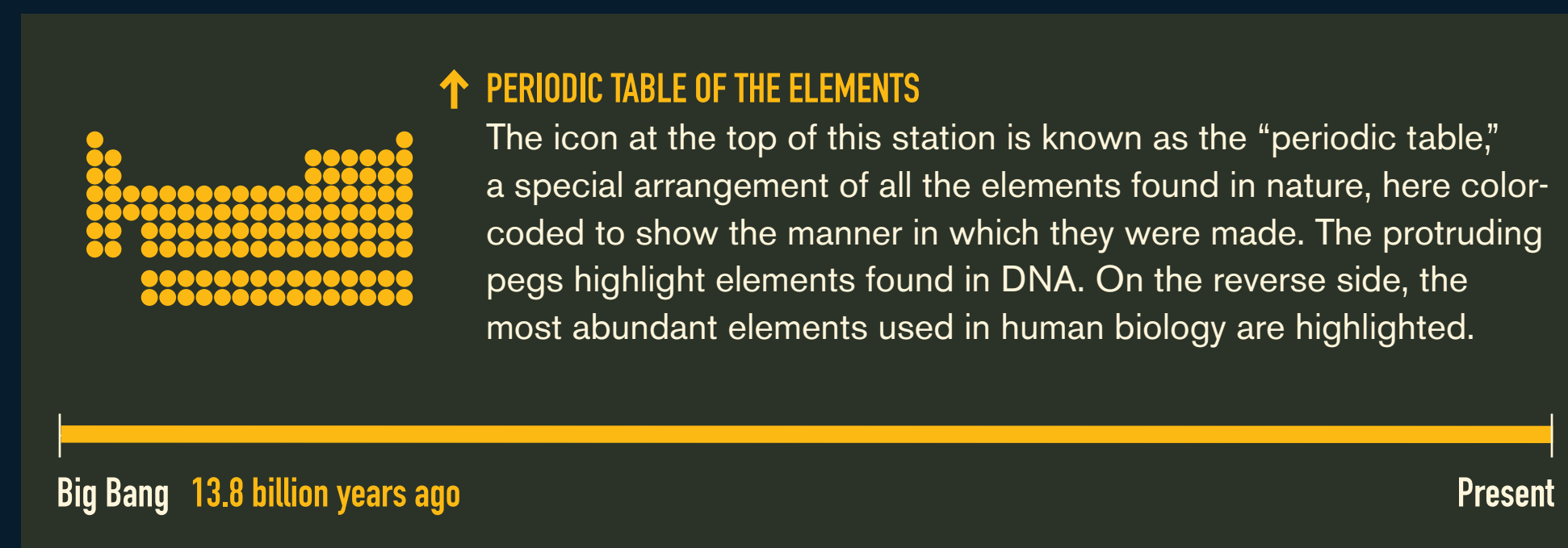
STATION 02 > The Cosmic Cycle of Matter

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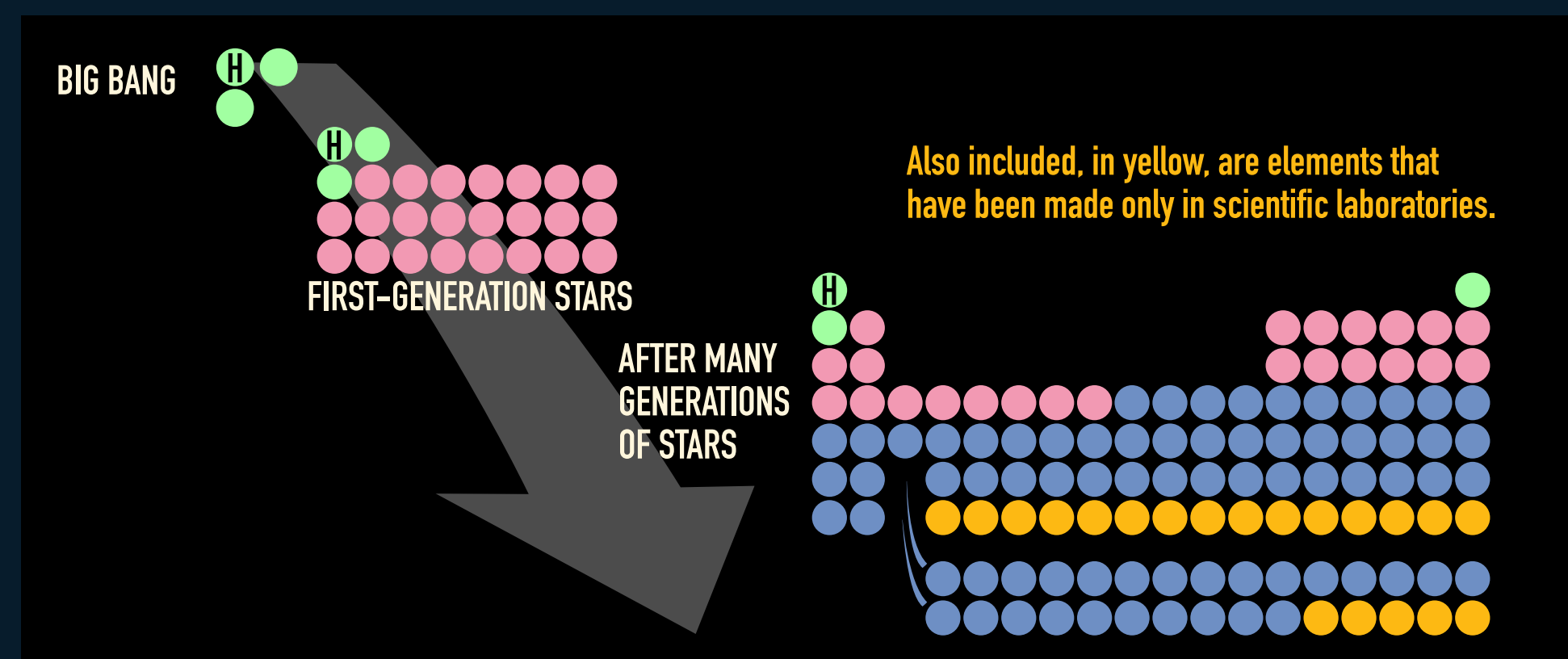


MOVEMENT OF MATTER: The bright blue objects at the top of the picture are stars and regions of hot gas. The brown-gold darker regions at the right and the bottom are cool clouds of dust and gas from which new stars are made. Atoms and molecules can move between the two regions.

From the diffuse medium between stars, matter gathers in a dense interstellar cloud that collapses and forms new stars, which later return their substance to interstellar space. Nuclear processes within the stars change the elemental makeup from its initial composition to the legacy materials bequeathed to the Universe upon stellar death.



Some Elements are Older than Others



BUILDING THE ELEMENTS: The elements grew in number after the Big Bang. About 100 elements occur naturally, but many are rare. Hydrogen (H) is the most common and it plays a major role in biology.

The elements on the periodic table make up all that you can see around you today, including stars and other objects in outer space. Hydrogen, carbon, oxygen, nitrogen, sulfur and phosphorus are

some of the more abundant elements in biological organisms. Rarer, but biologically important, elements include iron, copper, zinc and iodine.